

## ABSTRACT

In the invention, an input image is divided into plural small regions. The color data in each small region are classified to the present  
5 group, and plural components are selected in descending order of the variance from the representative color obtained from each group. The color data in the objective group is divided into plural groups in the direction of the selected component, and the representative color of each group is extracted. Such sequential group dividing and the  
10 representative color extracting are repeated until a specific number of representative colors are obtained. Therefore the high precise compression and approximation of image can be performed at high speed.